NPDES PERMIT NO. NM0028479
STATEMENT OF BASIS

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

1. APPLICANT

Jemez Valley Public Schools
8501 Highway 4
Jemez Pueblo, NM 87024

2. ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

3. PREPARED BY

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4. DATE PREPARED

July 17, 2006

5. PERMIT ACTION

Proposed reissuance of the current National Pollutant Discharge Elimination System (NPDES) permit issued October 30, 2003, with an effective date of December 1, 2003 and an expiration date of August 31, 2006.

Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed in Title 40, Code of Federal Regulations, revised as of July 1, 2006.

6. DISCHARGE LOCATION

As described in the application, the discharger is a school district near Canon, New Mexico, operating a publicly owned treatment works (POTW). The site is located at 8501 Highway 4, Jemez Pueblo, in Sandoval County, New Mexico. The Water Quality Segment (WQS) number where this facility discharges to was changed from 20.6.4.105 to 20.6.4.107 in the State Of New Mexico Standards For Interstate And Intrastate Surface Waters 20.6.4 NMAC, as amended through February 16, 2006. The previous downstream boundary for segment 20.6.4.107 was defined as the confluence of the Jemez River and the Rio Guadalupe. In the revised standards, the downstream boundary was extended approximately one mile to the northern boundary of the Jemez Pueblo where the Jemez River enters Pueblo land. The Jemez Springs Municipal Schools discharge is located within the area of this segment extension. The single outfall of the facility is located in the Jemez River at:

Latitude 35° 39' 24" North, Longitude 106° 44' 19" West

7. RECEIVING STREAM STANDARDS

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (NM WQS), 20.6.4 NMAC, as amended through February 16, 2006.

The designated uses of the receiving waters are coldwater aquatic life, primary contact, irrigation, livestock watering, and wildlife habitat.

8. APPLICANT ACTIVITY

Under the Standard Industrial Classification (SIC) Code 4952, the applicant currently operates a POTW treating domestic waste from a public school campus.

The facility has a design flow capacity of 0.030 million gallons per day (MGD).

9. EFFLUENT CHARACTERISTICS

The facility submitted information in its application that describes the nature of the permitted discharge. The following is a summarization of data reported since 2005.

Parameter	Avg. Monthly (mg/l unless noted)	Max. Daily
Flow, million gallons/day (MGD)	0.001	0.0046
pH, minimum, standard units (su)	N/A	7.1 su
pH, maximum, standard units (SU)	N/A	7.7 su
Biochemical Oxygen Demand, 5-day ($BOD_{(5)}$)	3	N/A
Fecal Coliform (FCB) (bacteria/100 ml)	32*	N/A
Total Suspended Solids (TSS)	4	N/A

* One sample was reported as 8900/100 ml

10. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

The proposed effluent limitations for those pollutants proposed to be limited are based on regulations promulgated at 40 CFR 122.44. The draft permit limits are based on either technology-based effluent limits pursuant to 40 CFR 122.44(a), on BPJ in the absence of guidelines, NM WQS and/or requirements pursuant to 40 CFR 122.44(d), whichever are more stringent.

a. Reason For Permit Issuance

It is proposed that the permit be issued for a 5-year term following regulations promulgated at 40 CFR 122.46(a). The initial permit renewal application was received on June 26, 2006.

b. Operation and Reporting

(1) Regulatory Basis
At a minimum, the facility will be required to treat to the equivalent of "secondary treatment" for domestic sewage, found at 40 CFR 133.102.

(2) Operation and Reporting
The applicant is required to operate the treatment facility at maximum efficiency at all times; to monitor the facility's discharge on a regular basis; and report the results quarterly. The monitoring results will be available to the public.

(3) Sewage Sludge Practices

Sludge produced at the treatment plant is hauled to the Southside Water Reclamation facility for final disposal. The landfill is located at 4201 2nd Street SW, Albuquerque, NM.

(4) Waste Water Pollution Prevention Requirements
The permittee shall institute or continue programs directed towards pollution prevention. The facility shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility.

(5) Industrial Wastewater Contributions
Based on information provided by the applicant, the facility does not receive industrial wastewater. EPA has determined that the permittee will not be required to develop a full pretreatment program. However, general pretreatment provisions have been included in the permit.

c. Technology Based Effluent Limitations/Conditions

Regulations promulgated at 40 CFR 122.44(a) require that technology-based effluent limitations be placed in NPDES permits based on effluent limitations guidelines where applicable, on best professional judgment (BPJ) in the absence of guidelines, or on a combination of the two.

Limitations on 5-day biochemical oxygen demand, (BOD_5), or 5-day carbonaceous biochemical oxygen demand, ($CBOD_5$), and total suspended solids, (TSS), are in accordance with "secondary treatment requirements" established at 40 CFR 133.102 (a) and 133.102 (b). Limitations on maximum and minimum pH are in accordance with 40 CFR 133.102(c).

d. Water Quality Based Limitations

The precertification document issued by the New Mexico Environment Department pursuant to Section 401 of the federal Clean Water Act is based upon the revised water quality standards currently effective under State law. In a letter from Marcy Leavitt (NMED) to Willie Lane (EPA) dated July 10, 2006, the State of New Mexico precertified that the discharge will comply with applicable provisions of Sections 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act and with appropriate requirements of State law upon inclusion of the conditions stated below in the permit.

The NM WQCC adopted new WQS for the State of New Mexico. The revised WQS as amended through February 16, 2006, are available on the NMED's website at http://www.nmenv.state.nm.us/swqb/Standards/20.6.4NMAC.pdf The WQCC established the revised WQS in accordance with, and under authority of, the NM Water Quality Act [Chapter 74, Article 6, NMSA 1978 Annotated]. The WQS have not been approved by EPA in accordance with Section 303 of the CWA.

In accordance with State law, the Water Quality Standards (WQS) were properly filed with the State Records Center and publicly noticed in the NM Register May 13, 2005. The revised WQS became effective under State law on May 23, 2005, and Standards were amended through February 16, 2006. The NMED has a non-discretionary duty to base state certification of federal water quality permits on applicable requirements of State law.

The agency is constrained by the Alaska Rule [Alaska Clean Water Alliance v. Clark, No. C96-1762R (W.D. Wash.)] in implementing the new NM WQS, until such time as the revised NM WQS are fully approved by EPA pursuant to Section 303 of the Clean Water Act. However, according to EPA memorandum from Geoffrey H. Grubbs, Director Office of Science and Technology dated September 15, 2000, if a State or tribe bases a section 401 certification on the more stringent state requirement, as allowed under CWA section 401(d), EPA would put the effluent limitations specified in the certification into an EPA-issued permit.

The Region, where appropriate, will draft permits with the new standards in place. If the new standards make more restrictive a limit, a compliance schedule will be placed in the permit. If a new parameter were added to the standards that would be added to the permit, then it would also get a compliance schedule. If the standard were less stringent than the currently approved standard, the Region would put the effluent limitation specified in the current Standards, until EPA approves the revised Standards. In addition, if the Region were required under a 401 certification to replace an effluent limitation of a pollutant for another effluent limitation of similar nature, the agency would include effluent limitations of both pollutants until the agency approves the revised Standards. However, the agency will grant a compliance schedule to allow the permittee sufficient time to achieve effluent limitation for the new parameter.

e. Post Third Round Policy and Strategy

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants 49 FR 9016-9019, March 9, 1984." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. The Regional policy and strategy are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in nonconformance with the provisions of 40 CFR 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

f. Implementation

The Region is currently implementing its post third round policy in conformance with the Regional strategy. The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

g. Reasonable Potential

All applicable facilities are required to fill out appropriate sections of the Form 2A and 2S, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to Publicly Owned Treatment Works (POTW's), but also to facilities that are similar to POTW's , but which do not meet the regulatory

definition of "publicly owned treatment works" (like private domestics, or similar facilities on Federal property). The forms were designed and promulgated to "make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities," per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the FRL.

The amount of information required for minor facilities was limited to specific sections of these forms, because they are unlikely to discharge toxic pollutants in amounts that would impact state water quality standards. Supporting information for this decision was published as "Evaluation of the Presence of Priority Pollutants in the Discharges of Minor POTW's", June 1996, and was sent to all state NPDES coordinators by EPA Headquarters. In this study, EPA collected and evaluated data on the types and quantities of toxic pollutants discharged by minor POTW's of varying sizes from less than 0.1 MGD to just under 1 MGD. The Study consisted of a query of the EPA Permit Compliance System (PCS) database from 1990 to present, an evaluation of minor POTW data provided by the State agencies, and on-site monitoring for selected toxics at 86 minor facilities across the nation.

PCS and the study showed that minor POTW's below 0.1 MGD comprise 40 % of all POTW's that serve very small communities and contribute a small amount of flow, generally with no industrial users. Of the facilities sampled in the study, which discharged one of the priority pollutants screened, all tested near or lower than the most stringent national water quality criterion. The most commonly detected pollutants were total phenolics (at 100% of facilities), zinc (at 92% of facilities), copper (at 64% of facilities), and lead (at 32.6% of facilities), with other pollutants detected at less than 10% of the study facilities, and with beryllium, mercury, and cyanide not detected at any of the facilities. Comparison of the effluent pollutant concentration data directly to water quality criteria did not take into account dilution, and did not consider other site specific factors such as hardness, temperature, turbidity, salinity, etc. This was considered an overly conservative approach by the study, but used as such to illustrate the extremely low reasonable probability these facilities had to violate state water quality standards. Due to the information supplied in the application, the Agency has determined that no reasonable potential exists for this discharge to violate applicable NM WQS for the protection of coldwater aquatic life, primary contact, irrigation, livestock watering, and wildlife habitat, beyond pH, fecal coliform, E. coli, and the use of chlorine discussed above.

h. Final Effluent Limitations

Technology-based effluent limitations are established in the proposed permit for the following pollutants; BOD_5, and TSS. Loading limits (30-day average) for BOD_5, and TSS however, are based on the previous permit (See Antidegradation section below). Water quality-based effluent limitations are established in the proposed permit for the following pollutants; fecal coliform, E. coli, pH, and TRC. Fecal coliform limitations are based on EPA approved 2002 NMWQS and E. coli limitations are based on State approved 2005 WQS. Water segment specific pH criteria are established to replace the existing pH limitations. A six (6) month's compliance period is established for E. coli.

i. Monitoring Frequency

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity 40 CFR 122.48(b) and to assure compliance with permit limitations 40 CFR 122.44(i)(1). The monitoring frequencies are based on BPJ, taking into account the nature of the facility and its design flow and the previous permit. Monitoring frequencies in the current permit are retained and a frequency of 1/quarter is established for E. coli.

j. Whole Effluent Toxicity (WET) Testing

The State has established narrative criteria, which in part state that

"...surface waters of the state shall be free of toxic pollutants from other than natural causes in amounts, concentrations or combinations that affect the propagation of fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food, or that will or can reasonably be expected to bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic organisms...." (NM WQS Section 20.6.4.13.F.(1))

The Implementation Guidance for NM Standards state that:

"Biomonitoring requirements will be applied to all major dischargers and those minor dischargers with known or potential problems to cause or contribute to exceedances of applicable [NM Standards] numeric or narrative water quality criteria in waters with existing or designated fishery uses" (Section VI. Narrative Toxics Implementation)

In a letter from Marcy Leavitt, NMED, to Claudia Hosch, EPA, December 16, 2005, NMED provided "Narrative Toxics Implementation Guidance – Whole Effluent Toxicity" (WET Guidance), an update to the 1995 Implementation Guidance. The discharge is to Jemez River and the critical low flow (4Q3) of Jemez River in that segment, based on the previous permit, is estimated to be 8.68 cubic feet per second (cfs) which is about 5.6 mgd. The design flow of the facility is 0.03 mgd. Therefore, the critical dilution of the discharge to the receiving stream is about 0.5%. Because the critical dilution is below 10%, an acute-to-chronic ratio of 10:1 is used to allow acute WET testing. In accordance with the

WET Guidance, the facility is required to conduct a single effluent characterization WET test using a 48-hour acute test with Daphnia pulex and Pimephales promelas and a 5% critical dilution.

k. Significant Changes from the Existing Permit

There are significant changes of permit conditions from the existing permit issued October 30, 2003, and expired August 31, 2006:

(i) Add effluent limitations and monitoring requirements for E. coli;
(ii) Change effluent limitation range of pH from 6.0 – 9.0 to 6.6 – 8.8; and
(iii) Add Whole Effluent Toxicity testing requirement.

11. 303(d) LIST

The Revised TMDL as of June 2004 listed Jemez River and the Rio Guadalupe Water Quality Segment 20.6.4.107 as impaired for Stream Bottom Deposits, and Chronic Aluminum. The TMDL and the 303d list were based on the previous description of the segment's downstream boundary as the confluence of the Jemez River and the Rio Guadalupe and did not consider the reach of the river below this confluence and above the Pueblo boundary. At the time of the TMDL revision, a Waste Load Allocation (WLA) for point source discharges was defined and the WLA for stream bottom deposits as Total Suspended Solids (TSS) was allotted to the Village of Jemez Springs Wastewater Treatment Plant. The Jemez Springs Municipal Schools discharge location was below the previously defined downstream boundary, therefore no WLA was assigned to this facility. Chronic Aluminum was determined to be from sources other than the Village of Jemez Springs wastewater treatment plant, or from treated domestic discharges. Taking into consideration that Jemez Springs Municipal Schools was not considered in the TMDL due to the facility's location; the change in segment boundary description; and no proposed changes to the discharge from this facility, NMED has determined that the current TMDL will not result in any change in permit effluent limit requirements for this facility. The TMDL for the Jemez River is scheduled for review in 2007.

12. ANTIDEGRADATION

The NMAC, Section 20.6.4.8 "Antidegradation Policy and Implementation Plan" sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use.

The facility built a new package plant in 1995, increasing the hydraulic capacity from 0.01 MGD to 0.03 MGD. The 2003 issued permit retained the mass loadings for BOD_5 and TSS, from the 1985 issued permit, as requested by the permittee. As requested by the NMED, because the permittee discharges less amounts of BOD and TSS than the limitations, the existing BOD and TSS mass loadings are retained in the proposed permit.

13. ENDANGERED SPECIES CONSIDERATIONS

Five species in Sandoval County are listed as Endangered or Threatened, according to the U.S. Fish & Wildlife Service's (USFWS) website, http://www.fws.gov/ifw2es/NewMexico/SBC.cfm. The lone aquatic specie is the Rio Grande silvery minnow. Three of the species are avian and include the bald eagle, Mexican spotted owl, and the southwestern willow flycatcher. Additionally, the black footed ferret is listed as endangered. Based on the evaluations made by EPA when EPA reissued the permit in 2003, EPA has determined that the environmental baseline has not been changed and, based on the information available to EPA, that the reissuance of this permit will have *no effect* on these federally listed threatened or endangered species.

14. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since no construction activities are planned in the reissuance.

15. CERTIFICATION

The permit is in the process of certification by the State agency following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

16. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

17. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

r. Application(s)
EPA Application Forms 1 and 2A signed and received June 26, 2006.

b. 40 CFR Citations
Sections 122, 124, 125, 133, 136

c. State of New Mexico References
New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through February 16, 2006.

Narrative Toxics Implementation Guidance- Whole Effluent Toxicity, State of New Mexico, December 16, 2005.

Region 6 Implementation Guidance for State of New Mexico Standards for Interstate and Intrastate Stream, May 5, 1995.